

ADRE[®] *for Windows[™]* *Refined and improved*

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Bentley Nevada's ADRE for Windows diagnostic software has become enormously popular among machinery diagnostic specialists who have seen its impressive value. It is powerful; data from several points can be viewed simultaneously, each in its own "window." It is flexible; data can be viewed in any of several plot formats, so the expert can choose the presentation that best exposes the parameter of interest. It is easy to use; because it takes advantage of common Microsoft Windows features, users feel comfortable with it immediately. It is portable; with a notebook computer, the system is compact and easy to carry.

Now, ADRE for Windows has been further refined and improved.

The ADRE for Windows system

The ADRE for Windows system consists of software, a computer that runs the software, hardware that collects machinery data, and a computer card that connects the computer to the data collection hardware. The data collection hardware is called the 208 DAIU (Data Acquisition Interface Unit).

The 208 DAIU is itself a sophisticated computer that performs all data acquisition for the system. This is key to ADRE for Windows' superior performance. Because the ADRE for Windows computer is freed from data processing

tasks, it can apply all of its power to storing and presenting the data and providing you with a fast, easy-to-use interface. Each 208 DAIU processes up to eight channels of vibration or process data simultaneously. It also acquires data from one or two Keyphasor[®] transducers, so vibration phase and machine speed information can be referenced to different shafts on machine trains with more than one shaft speed. Two 208 DAIUs can be used to acquire up to sixteen channels of data. The 208 DAIU is portable, and operates on an internal battery or an auto-sensing power supply that works with supply voltages from 90 to 260 Vac and from 47 to 63 Hz.

Using the ADRE for Windows system

An ADRE for Windows System can be permanently installed in a control room, with the 208 DAIU hard-wired to continuous monitors. It can also be used as a laboratory instrument, processing taped data. In either case, a desktop computer would be appropriate. However, the ADRE for Windows System was designed to be portable.

Typically, Plant Operations might alert the company's machinery diagnostics engineer to a potential machinery problem. The engineer carries a 208 DAIU and a notebook computer, loaded with ADRE for Windows Software, to the

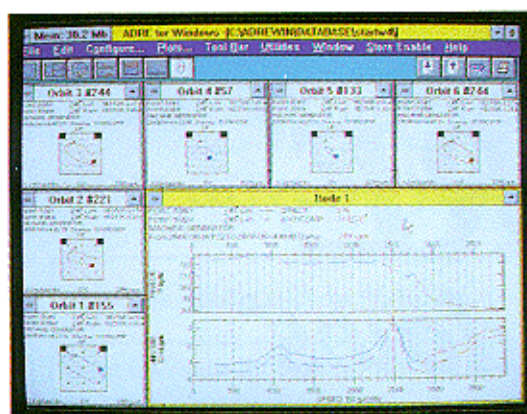
machinery monitoring system. He connects coaxial cables from the machine's transducers or monitoring system to the 208 DAIU. Then, he begins collecting and analyzing data. The data can be viewed as it is collected, stored for later analysis, or both. The engineer can view data from several transducers, each in its own window, view data from one transducer in several different plot formats, each in its own window, or both.

Typically, the experienced engineer first views data from several transducers simultaneously to quickly localize the problem to a specific machine region. Then he views data from a selected few transducers in different plot formats. Because different plot formats emphasize different vibration characteristics, he selectively views various plots to verify the existence or absence of certain vibration characteristics. With a portable ink-jet or laser printer, he can print plots on site; otherwise, he can print plots when he returns to his office. If the problem occurs infrequently, he can leave the system in place, set to automatically collect data on triggers that he specifies. The triggers can be time intervals, a change in machine speed, a change in amplitudes (1X, 2X, nX or direct vibration, probe gap or process variable) or phase, or closing switch contacts. When the time comes to write reports, all ADRE for Windows data can be cut and pasted, through the Windows Clipboard, to other Windows programs. This makes reports easier to write, and gives them a more polished look.

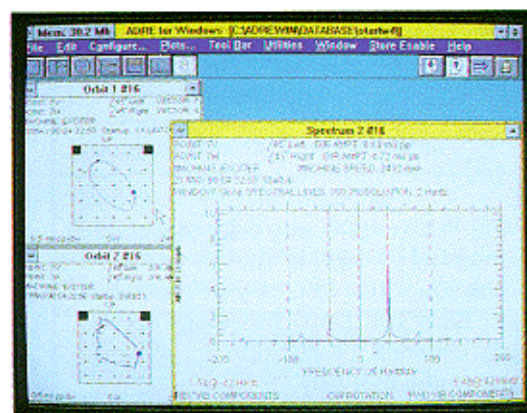
Improvements to ADRE for Windows version 2.2

Directly uploads data from the 108 DAI. The 108 DAI (Data Acquisition Instrument) is an earlier generation of the 208 DAIU. It has capabilities similar to the 208 DAIU, but is configured through buttons on its front panel, rather than through a computer interface. ADRE for Windows has always been able to use this data, but it had to be converted by a DOS-based conversion program. Now ADRE for Windows will directly upload 108 DAI data, with no intermediate conversion required.

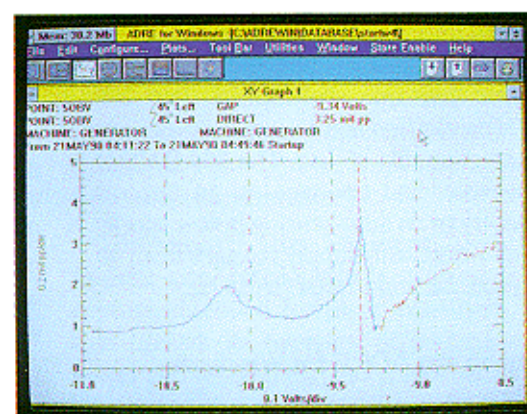
Bode plot with "Plus Orbits"



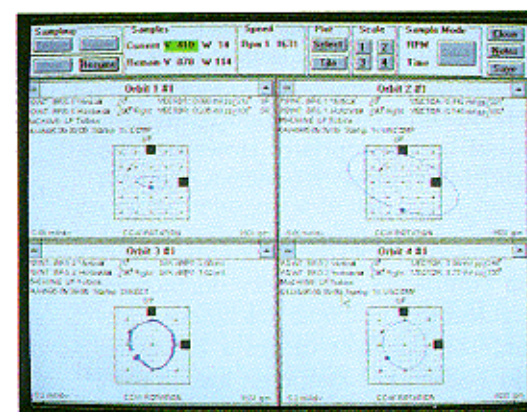
Full Spectrum plot with "Plus Orbits"



XY graph direct versus gap



Four real-time plots



Works with wider range of computers. A new interface card works in a wider range of computers. This gives you greater flexibility in choosing the computer system you use.

Four real-time plots. Real-time mode is operation while actually collecting machine data. Now, real-time data can be displayed in four plots, rather than two, as the data is collected. The plots may be re-sized and re-scaled. You can watch plots change as the data changes, in real time, to see the effect of resonances or process changes on machine response. The data acquired during real-time mode can be manually saved to a disk at any time, or automatically saved to a disk at user-defined time or sample intervals.

Task-switching supported. Now, ADRE for Windows can work in the background, while you use other Windows programs. You can be more productive, because you can use your computer for other jobs while ADRE for Windows works, in the background, collecting machine data.

Full Spectrum Display. A new plot format, a spectrum display that shows both forward and reverse precession components, is now available. A full spectrum display has the same relationship to a spectrum display as an orbit display has to a timebase display; that is, it is information processed from two orthogonal transducers, not just one.

And many more... Many more enhancements have been incorporated to help the user diagnose machinery problems and to make the user interface more convenient and intuitive.

The most advanced portable diagnostic system available

ADRE for Windows is the tool that Bently Nevada's Machinery Diagnostic Services engineers prefer to use in the machinery analyses they perform around the world. It is used by Bently Rotor Dynamics Research Corporation scientists in their investigations into machinery behavior. It incorporates the functions that they, and our customers, have suggested. It is the most advanced portable diagnostic system available. Contact your nearest Bently Nevada Sales office for a demonstration. ■